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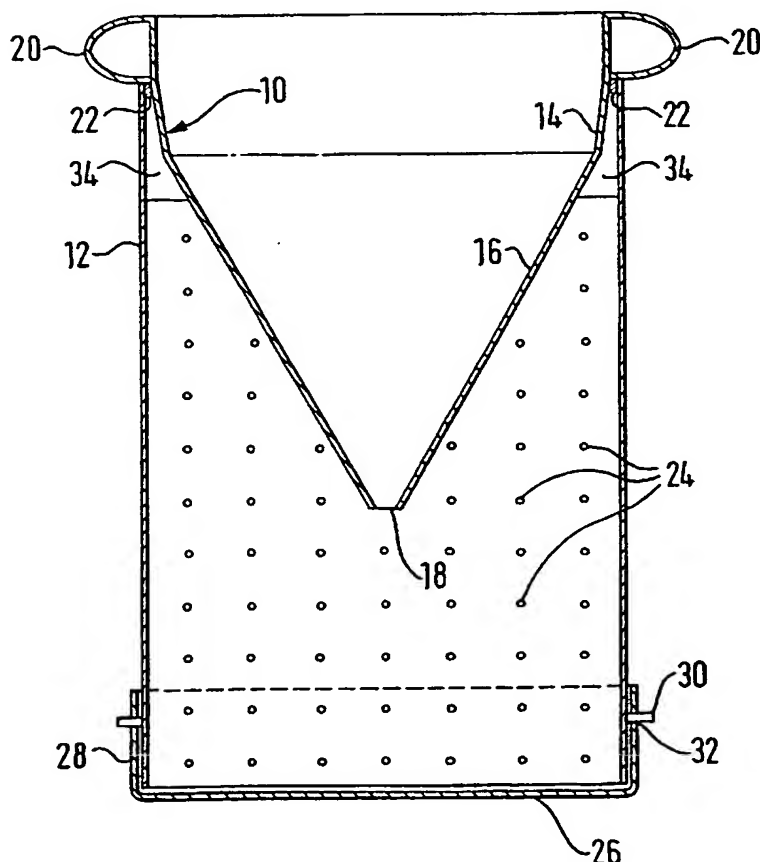
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(54) Title: FISH BREEDING TRAP



(57) Abstract: A fish breeding trap comprises a first container (10) having a tubular upper portion (14) and a funnel lower portion (16) of substantially conical shape. At the bottom of the funnel portion (16) an outlet (18) is provided. Buoyancy means is provided at or near to the top of the edge of the tubular upper portion (14). A second container (12) is provided being cylindrical with an open top into which the first container (10) can be fitted with an air tight seal therebetween and the funnel portion (16) of the first container (10) extending thereinto with the outlet (18) in communication with the interior of the second container (12). The buoyancy means of the first container (10) is provided by an annular member (20) surmounting the top of the upper portion (14).



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- Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

FISH BREEDING TRAP

This invention relates to a fish breeding trap for use in an aquarium.

A problem exists in breeding viviparous fish in that fry are eaten by fish and
5 therefore first of all the expectant parent requires to be separated from other fish in
the aquarium and secondly the fry, to survive require to be relatively quickly removed
from the vicinity of the parent. A further problem is that fish tend to be 'dropped' by
the parent at night and therefore any trap provided requires to remove the fry
automatically when born. It is known that fry, when born, sink to the bottom of the
10 container in which they are born. It is preferable that the trap be located within the
aquarium.

An object of the present invention is to provide a fish breeding trap which
obviates or mitigates the aforesaid problems.

Accordingly, the present invention is a fish breeding trap comprising a first
15 container having a tubular upper portion and a funnel lower portion of substantially
conical shape and at the bottom of which an outlet is provided and buoyancy means
being provided at or near to the top of the edge of the tubular upper portion.

Preferably, a second container is provided being cylindrical with an open top
into which the first container can be fitted with an air tight seal therebetween and the
20 funnel portion of the first container extending thereinto with the outlet in
communication with the interior of the second container.

Preferably also, the buoyancy means of the first container is provided by an
annular member surmounting the top of the upper portion. The annular member is
preferably a sealed hollow unit.

25 Alternatively, the buoyancy means is a series of equi-spaced buoyancy
devices and a similar series of equi-spaced buoyancy devices is provided at the top

of the second container. It is desirable that the buoyancy devices of both series fit together alternately to form an annular buoyancy member.

The air tight seal is desirably an O-ring being positioned at the junction between the upper portion and the annular member.

5 Preferably also, the integrity of the wall surround of the second container is destroyed by a plurality of perforations or slits, the perforations or slits being of a size to allow water to seep into the second container but to prevent any fry therein exiting therefrom.

Preferably further, the bottom of the second container is desirably removable.

10 The bottom is desirably provided with an upper wall portion to overlap the bottom edge portion of the second container and securing means are beneficially provided between the overlapping portions. The securing means is desirably a bayonet joint.

Embodiments of the present invention will now be described, by way of example, with reference to the accompanying schematic drawings in which:-

15 Fig. 1 is a cross-sectional view of a fish breeding trap according to a first embodiment;

Figs. 2 and 3 are perspective views of the trap of a second embodiment from above and below respectively; and

Fig. 4 is a vertical cross-sectional view of the trap of Figs. 2 and 3.

20 Referring to Fig. 1 of the drawings, a fish breeding trap according to a first embodiment comprises a first container 10 and a second container 12 in vertical relationship. The first container 10 has a tubular upper portion 14 and a funnel lower portion 16 of substantially conical shape and at the bottom of which an outlet 18 is provided and buoyancy means is provided at the top edge of the tubular upper
25 portion 14. The second container 12 is cylindrical with an open top into which the first container 10 is fitted with an air tight seal therebetween and the funnel portion 16

extending therinto with the outlet 18 in communication with the interior of the second container 12.

The buoyancy means for the first container 10 is provided by an annular member 20 in the form of a sealed hollow unit surmounting the top of the upper portion 14. The air tight seal is obtained by an O-ring 22 being positioned at the
5 junction between the upper portion 14 and the annular member 20.

The wall surround of the second container 12 is perforated. The perforations 24 are of a size to allow water to seep into the second container 12 but to prevent any fry exiting therefrom.

10 In a modification, the bottom 26 of the second container 12 is removable and is provided with an upper wall portion 28 to overlap the bottom edge wall portion of the second container 12 and securing means are provided between the overlapping portions. The securing means is shown as a bayonet joint with diametrically opposite pins 30 extending from the bottom edge wall portion of the wall surround of the
15 second container 12, the pins 30 engaging in slots 32 provided on the upper wall portion 28 of the bottom 26.

In a second embodiment as shown in Figs. 2, 3 and 4 in which like parts are denoted by like numerals, the trap has first and second containers 10, 12 in which the buoyancy means of the first container 10 is a series of three equi-spaced similar
20 buoyancy devices 36. A similar series of three equi-spaced buoyancy devices 38 are provided at the top of the second container. Each buoyancy device 36 or 38 are formed by a reflexively bent flange 40 with the side edges of the flange and container having end walls 42, the devices trapping air under the flanges when the containers 10, 12 are placed in water. The buoyancy devices 36, 38 of both series fit together
25 alternately as shown to form an annular buoyancy member 44.

The wall support of the second container 12 is provided with a series of slits 46 as is the wall surround of the first container 10.

In use of both embodiments, the trap with first container 10 fitted inside second container 12, is placed in an aquarium and floats with water rising in the containers 10, 12 to the top of the upper portion 14. Due to the air tight seal between the two containers 10, 12, air is trapped in a pocket 34 at the top of the second container 12 and under the funnel lower portion 16. An expectant fish is placed in the first container 10. Fry, when born, fall and are guided by the sloping sides of the lower portion 16 to pass through the outlet 18 and into the second container 12 wherein they can grow and rise around the lower portion 16 and 'engulf' air from the trapped air for the initial filling of the swim bladder. The trap is versatile in that if no other fish are in the aquarium or with fish in the aquarium and the fry have grown, the bottom 26 can be removed and the fry then pass straight into the main aquarium.

The first and second containers 10, 12 can be used separately. A circular lid (not shown) is provided to close off the open top of the first container 10. The lid has a series of radial slots and a knob handle axially thereof.

Variations and modifications can be made without departing from the scope of the invention described above and as claimed hereafter.

CLAIMS

- 5 1. A fish breeding trap comprising a first container having a tubular upper portion and a funnel lower portion of substantially conical shape and at the bottom of which an outlet is provided and buoyancy means being provided at or near to the top of the edge of the tubular upper portion.
- 10 2. A trap as claimed in Claim 1, wherein a second container is provided being cylindrical with an open top into which the first container can be fitted with an air tight seal therebetween and the funnel portion of the first container extending thereinto with the outlet in communication with the interior of the second container.
- 15 3. A trap as claimed in Claim 1 or 2, wherein the buoyancy means of the first container is provided by an annular member surmounting the top of the upper portion.
4. A trap as claimed in Claim 3, wherein the annular member is a sealed hollow unit.
- 20 5. A trap as claimed in Claim 3, wherein the buoyancy means is a series of equi-spaced buoyancy devices and a similar series of equi-spaced buoyancy devices are provided at the top of the second container.
- 25 6. A trap as claimed in Claim 5, wherein the buoyancy devices of both series fit together alternately to form an annular buoyancy member.
7. A trap as claimed in Claim 3, 4, 5 or 6, wherein the air tight seal is an O-ring being positioned at the junction between the upper portion and the annular member.

8. A trap as claimed in any one of the preceding Claims, wherein the integrity of the wall surround of the second container is destroyed by a plurality of perforations or slits, the perforations or slits being of a size to allow water to seep into the second container but to prevent any fry therein exiting therefrom.

5

9. A trap as claimed in any one of the preceding Claims, wherein the bottom of the second container is removable.

10. A trap as claimed in Claim 9, wherein the bottom is provided with an upper wall portion to overlap the bottom edge portion of the second container and securing means are provided between the overlapping portions.

10

11. A trap as claimed in Claim 10, wherein the securing means is a bayonet joint.

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12. A fish breeding trap substantially as hereinbefore described with reference to Fig. 1 or Figs. 2 to 4 of the accompanying drawings.

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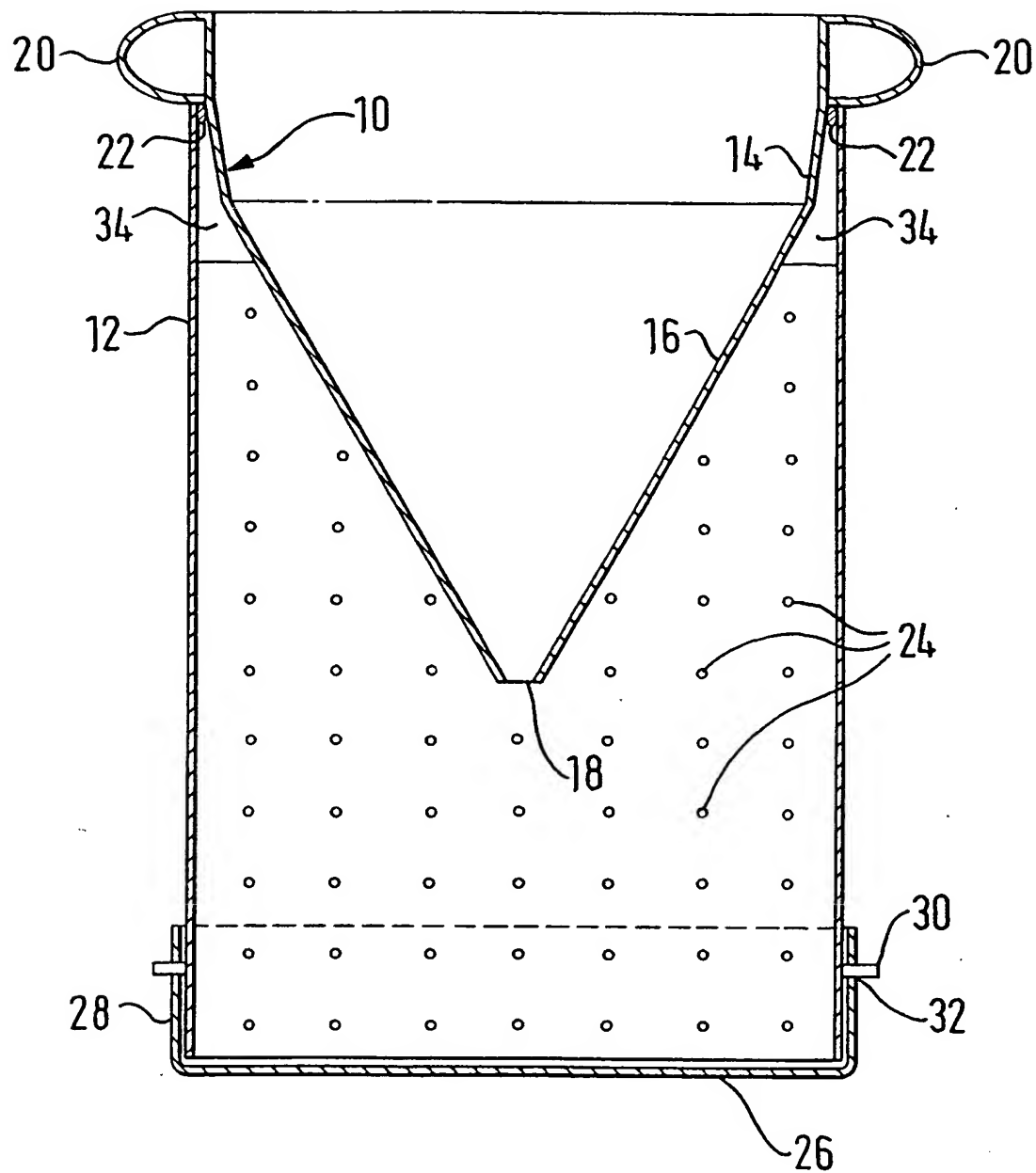
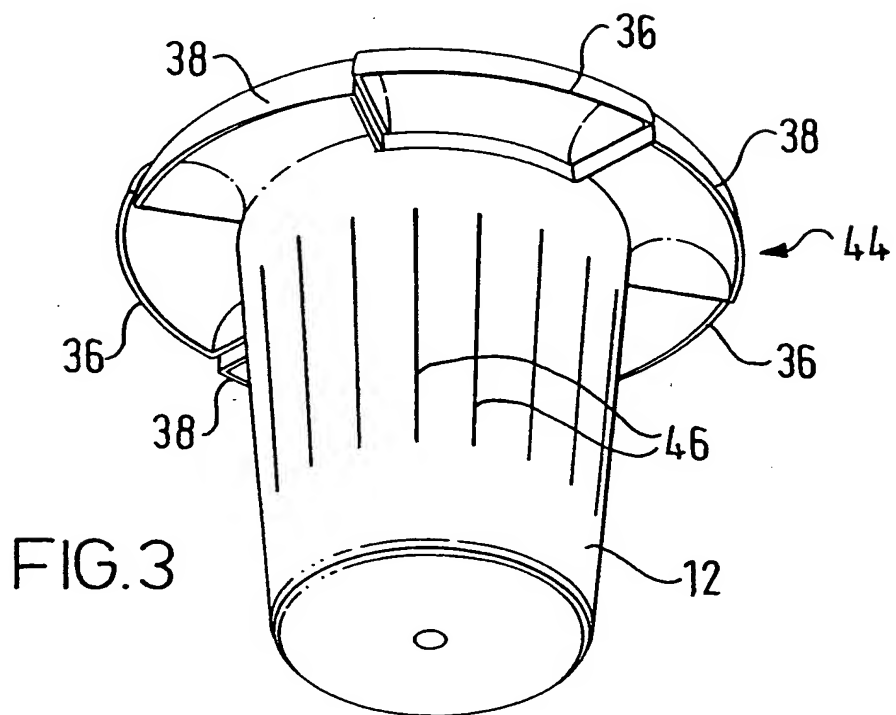
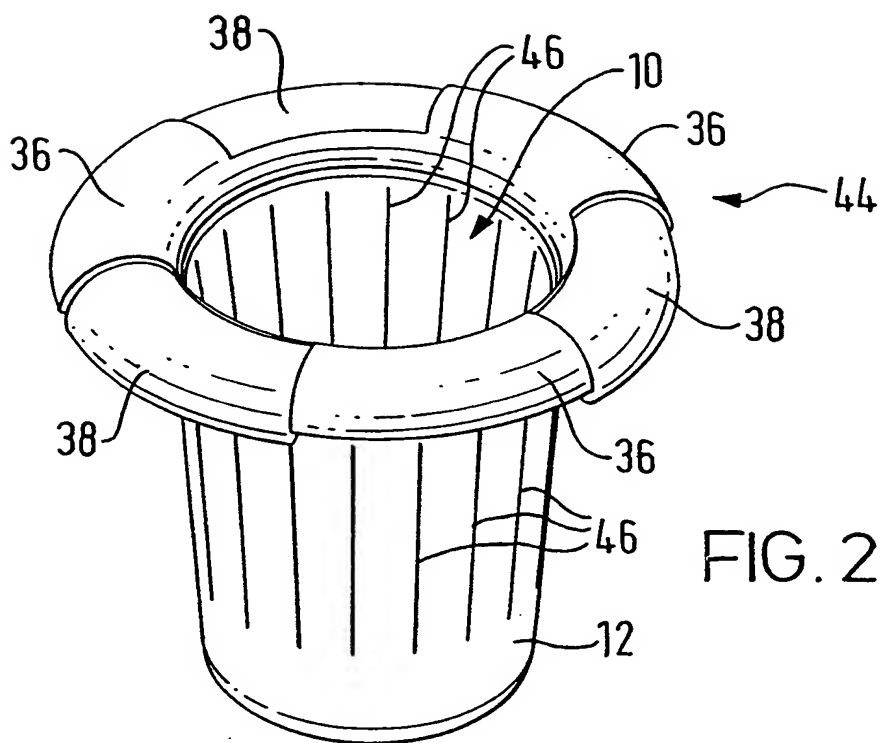
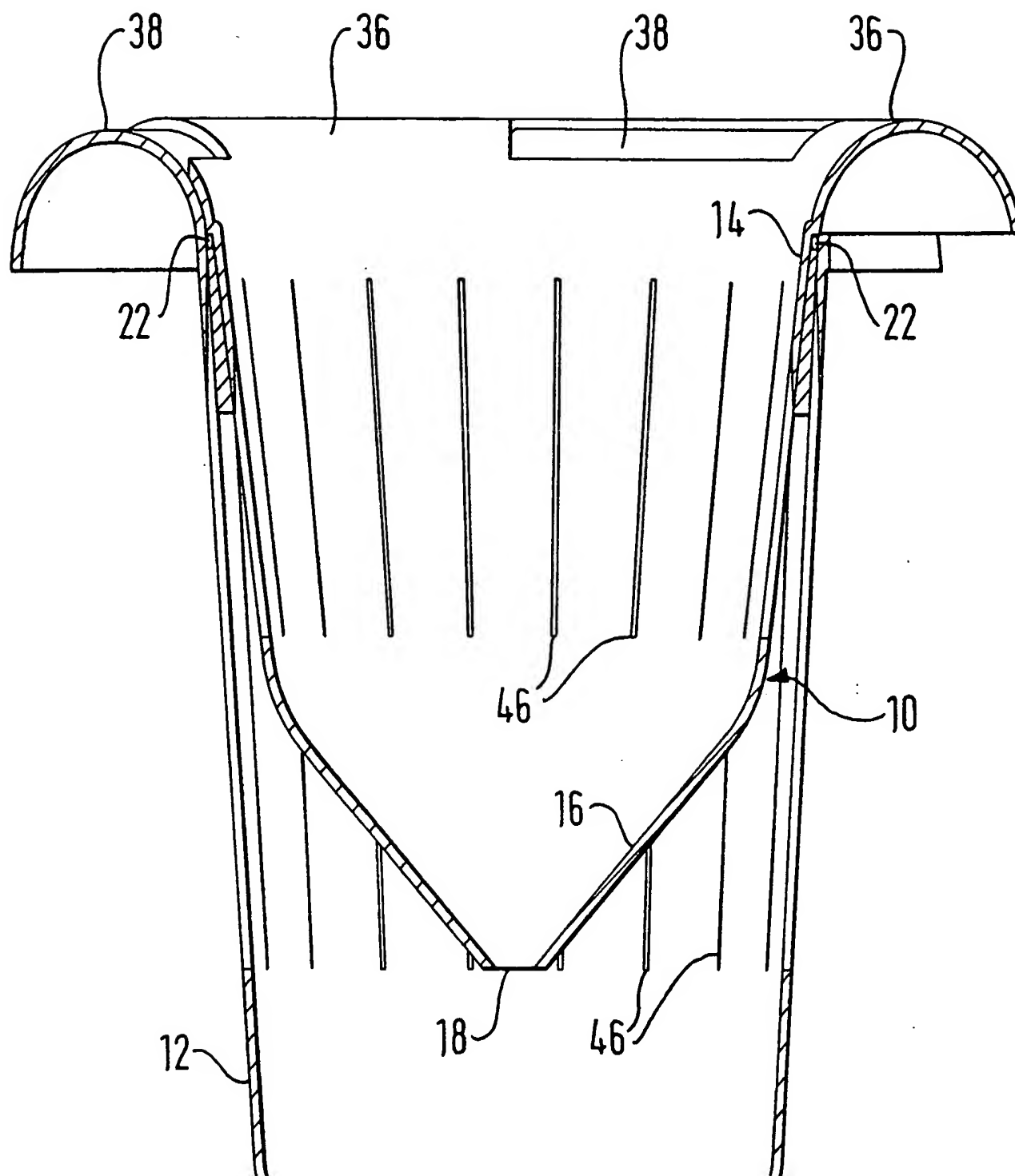


FIG. 1

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/01985

A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A01K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 683 853 A (LEWIS RAYMOND H) 15 August 1972 (1972-08-15) figures 1,2	1-4, 12
A	US 3 140 691 A (STARK, L.) 14 July 1964 (1964-07-14) figures 1,9,12	1-3, 8-10, 12
A	FR 2 506 563 A (RICOLLEAU JEAN) 3 December 1982 (1982-12-03) the whole document	1-12

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

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- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Parent family member(s)	Publication date
US 3683853 A	15-08-1972	NONE	
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FR 2506563 A	03-12-1982	NONE	

